

MINOS

D. Bogert

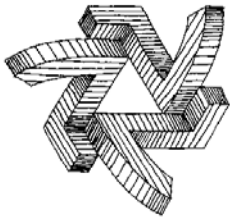
NuMI/MINOS PMG

May 13, 2003

NuMI Civil Construction



Structural Steel Framing has been erected at MI-65 (“The NuMI Target Service Building”.) Detailing is underway at MI-65, and erection of the structural steel framing is underway at the MINOS Service Building.



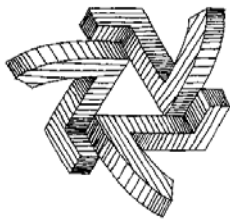
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D. Bogert NuMI/MINOS PMG May 13, 2003

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At the MINOS Service Building the masonry spiral is under construction.



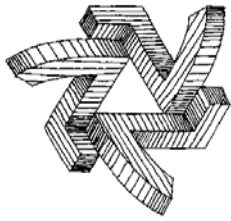
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D. Bogert NuMI/MINOS PMG May 13, 2003

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At the MINOS Service Building samples of the veneer brick bonds “Stack Bond” (Left) and “Running Bond” (Right) have been laid for esthetic choice.

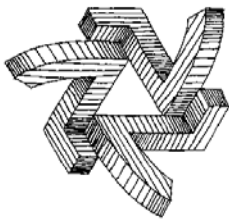


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NuMI/MINOS PMG
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NuMI Civil Construction



In the Target Hall the Outfitting work shows rough-in of the electrical service, including lights, and process water piping (for the decay pipe cooling.)

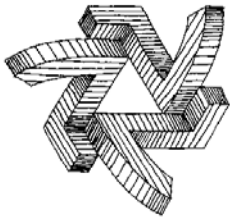


MINOS

Progress / Overview Civil Construction

Ragnar Benson and subcontractors have continued utilities work at the Target (MI-65) and MINOS Service Building sites. At the MINOS site utility pipe installation continued, and at MI-65 work on duct banks is nearing completion. Excavation to bring the pond water cooling pipes and additional electrical and control service to MI-62 was completed, and installation of pipes and ducts has begun. At the MI-65 Service building the structural steel framing is completed, and detailing has begun. At the MINOS Service Building the construction of interior and exterior load bearing masonry walls is underway. The structural steel for the MINOS Service Building has been delivered and most of the frame is erected.

The critical path for the Service Buildings and Outfitting in the current (original) Ragnar Benson schedule now reflects a negative float of about 16 days in our analysis. A new (recovery) schedule submitted by Ragnar Benson is in place. The new schedule will accelerate the remainder of the work to complete the contract “on time” with adjustments for any time extensions granted. The new schedule shows completion of all remaining intermediate contract milestones on time.

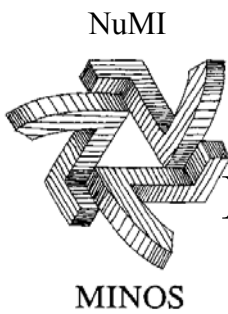


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Progress / Overview Civil Construction – Continued

At MINOS, piping fabrication continued in the weld shop that was set up in the MINOS Hall. Sprinkler piping continues to be installed at both sites, most recently in the emergency corridors. Process water pipe installation continued, most recently on top of the emergency corridor roofs in MINOS Hall and MINOS access. Electrical rough in has begun in MINOS Hall and continued in the Absorber Access and Absorber Hall. The MINOS detector support structure has been erected, and hand-rail installation has continued. HVAC installation by the subcontractor is underway, primarily in the emergency egress corridors.

In the below grade Target area outfitting, process piping installation, cable tray and electrical installation, fire protection, and HVAC installation continues throughout all areas. In the Carrier Tunnel and Pre Target areas electrical trim continues. In the support rooms the electricians and pipe-fitters continue rough-in work. Electrical rough-in and trim continue in Target Hall, and piping rough-in continues. Pipe fitters continue the connections through the utility labyrinth from the Pre-Target area to the RAW room. Cooling pipe connections at the upstream Decay Pipe are complete, and connection to the RAW room has begun. All Hazard Assessment documents for any work in progress are in place and accepted.



Construction – Inflow water cooling plan being implemented

A value-engineering plan to use the inflow water in the NuMI Tunnels for cooling has been developed in discussion with Ragnar Benson. Under this plan, the discharged water will be pumped directly into the Fermilab ICW water system for other use on site. This plan also uses the tunnel inflow water for process cooling. Two weeks ago Ragnar Benson was informed that Fermilab will generally proceed with this plan; parts of the plan are now accepted, and other parts are being iterated for maximum benefit at minimum cost. These discussions continue.

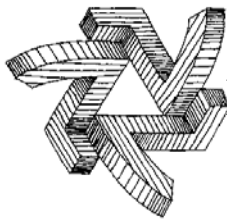
A review of the MINOS Pumping plans for the final configuration to ensure fail-safe operation in all eventualities is complete. A final report was submitted. The review used the specified equipment and drawings for the above-mentioned Value Engineering Plan as the basis for technical considerations. The final report proposed a few relatively minor changes/additions to achieve the desired high reliability/availability. These additional design features are being added to the Value Engineering Plan.



Critical Path of the Service Buildings and Outfitting (Ragnar Benson) Contract

NuMI/MINOS PMG
May 13, 2003
NuMI Civil
Construction
D. Bogert
Page 8

There are approximately 340 work elements over the ten contractual milestones. For payout purposes, most of the milestones have been divided into thirds. At this point, Ragnar Benson has started 159 of the work elements, and completed 108. Of the 51 elements now underway, 10 have started prior to early start. Twenty-two elements are now not started after their scheduled early start, but sixteen of the twenty-two are still prior to their respective late start dates. This week six of the twenty-two elements are late with respect to late start, and three of those are late with respect to late finish. Fourteen more elements are currently underway and late with respect to late finish. Using the current (or original) Ragnar Benson schedule, there is negative float to contract completion, and a projected late completion. Project Management now assesses the “current” critical path as 16 workdays late. There has been improvement (reduction of the negative float) over the last five weeks. Ragnar Benson has submitted a new schedule that has been accepted by Project Management. The new schedule projects, and Project Management agrees, that the work in its entirety will be completed on time. The new schedule is based upon the fact that Milestone 3 (service buildings footings and foundations) was completed about eighteen workdays late. The schedule provides for acceleration of the remaining work to achieve an overall on-time completion. The new schedule relies upon increases in electrician and pipefitting staffs to achieve the acceleration to provide the on-time completion. Ragnar Benson has also requested up to eight days time extension. This request is also under review.



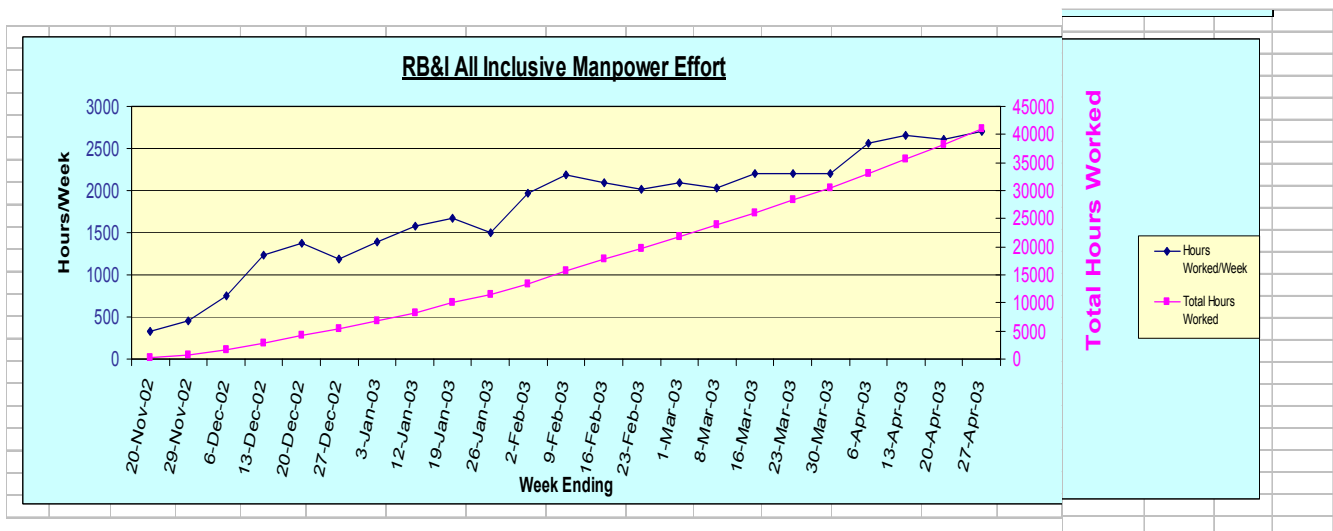
Critical Path of the Service Buildings and Outfitting (Ragnar Benson) Contract (Continued)

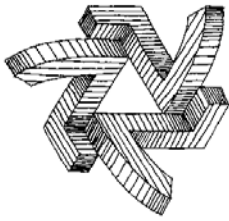
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When the PMG last met in March, the Ragnar Benson contract was reported to have a negative float to completion of about thirteen days. Today we report a negative float of sixteen days. In the intervening two months, the situation deteriorated, and then improved following an exchange of letters and the acceptance of a revised schedule that included increased staffing. On a weekly basis, the negative float was:

March 10:	13 days
March 17	18 days
March 24	18 days
March 31	23 days
April 7	28 days
April 14	25 days
April 21	21 days
April 28	19 days
May 5	18 days
May 12	16 days

One can note the impact of the new schedule and additional electricians and pipe fitters as seen in the chart of weekly effort and in the decrease in negative float.





MINOS

Close-Out Activities for the S. A. Healy Contract The Fifth DRB Recommendation was delivered a week ago.

Six disputes have been presented to the Disputes Review Board (DRB). To date, DRB recommendations have been received on five of the issues. The DRB Recommendation on the Safety Stand-down for entitlement was received two weeks ago week. The last DRB recommendation (Decay Tunnel Chimney DSC for quantum), which hearing was held in September remains outstanding.

S.A.Healy and Fermilab have agreed to suspend further DRB hearings pending completion and presentation of all requests for equitable adjustment (REA)/claims. The parties have agreed to target delivery of all outstanding REA/claims by the end of May with the objective of entering into serious negotiations of any and all issues starting on June 23rd. As part of this effort Fermilab is currently undertaking and/or updating reviews of all unresolved REAs submitted to date.

A window for a future DRB hearing(s) has been set for July 14-18. No specific issue has been identified for this DRB hearing(s) window.